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## DIFFERENTIAL DECODER FOLLOWED BY NON-LINEAR COMPENSATOR

*MOD  
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The invention relates to a receiver for receiving modulated coded signals and comprising a phase-shift-keying demodulator for demodulating said signals and comprising a differential detector for decoding said signals.

The invention also relates to a non-linear compensator for use in a receiver for  
5 receiving modulated coded signals and comprising a phase-shift-keying demodulator for demodulating said signals and comprising a differential detector for decoding said signals, and to a transceiver comprising a transmitter with a differential coder and a phase-shift-keying modulator for transmitting modulated coded signals and comprising a receiver for receiving said modulated coded signals with a phase-shift-keying demodulator for  
10 demodulating said signals and a differential detector for decoding said signals, and to a method for receiving modulated coded signals and comprising the steps of demodulating said signals via phase-shift-keying demodulation and of decoding said signals, and to a processor program product for receiving modulated coded signals and comprising the functions of demodulating said signals via phase-shift-keying demodulation and of decoding said signals.

15 Such a receiver forms for example part of a transceiver used in consumer products for wireless communication at short distance, like for example one or ten meters. Said phase-shift-keying demodulator for example corresponds with a differential-quadrature-phase-shift-keying demodulator comprising a  $\pi/4$ -differential-quadrature-phase-shift-keying demodulator ( $\pi/4$ -DQPSK demodulator).

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A prior art receiver is known from US 6,127,884, which discloses in its figure  
1 a transceiver with a receiver part for receiving modulated coded signals comprising a differential-quadrature-phase-shift-keying demodulator consisting of two mixers and a phase  
25 shifter for demodulating said signals and comprising a differential detector for decoding said signals. Said transceiver further comprises a transmitter part comprising an encoder and a modulator for transmitting said modulated coded signals.